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Essay

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Mountain Rainforest Management in Babati District, Tanzania.



Foto: Linda-Mari Ericsson, 050309.

View over the Haraa forest reserve.

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Abstract

This paper deals with Community Based Forest Management in Mountain rainforests in Babati. This form of management is when the Communities are managing the forest with some help from the Government.

I have made a field study to see how the managing is working the mountain forests. I made interviews with chairmen, guards and district council. The purpose with the interview is to give answers to my questions about CBFM and how it is working. I want to see if the CBFM is sustainable in Babati and know if the villagers are satisfied with it. To answer the sustainability questions, studies in Ostroms eight principles for sustainable forest management is made. The main conclusions of the study are: Babati will have a sustainable management if they follow the rules and laws that are made for Community Based Forest Management, if the community gets some kind of benefits for being the manager and they want to take care of the forest in a good way when they are the owners. If there are threats against the villagers like pressure from others villages or corruptions this sustainability can be destroyed.

CBFM needs supporting systems, help from the Government, clearly defined boundaries and the basic needs like food and shelter is fulfilled before they can think of the ecosystem health and sustainability.

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1. Introduction

1.1 Background.

In the most countries in Africa there is a community-based forest and natural resource management, which is a reaction to the laws inherited from Colonial times. Licences and other forms of taxes so far unknown to local communities were imposed to control the exploitation of forest products that the local inhabitants before they had free access to, for their domestic consumption or for marketing (www.wrm.org.uy/subjects/CBFM/book3.html#Tanzania, 050405).

Tanzania has approximately 33.5 million hectares of forest and woodlands, 75 percent of the woodland area is public land. These public lands are highly pressured because of the expansion of human activities such as agriculture and livestock. The Government have now understood that they cannot alone protect and manage the forest resources sustainable. The community has to be involved in the management, to have a good sustainable development. Almost every mountain in Tanzania is forested and has been under Government protection because these forests are important to the groundwater reserve. Because of their importance, these forests have been called as National Catchment Forests (District Forest Officer, paper received 050313)

There are about 250 000 inhabitants in Babati District. The rain is variable with seasonal fluctuations, the dry season is from May-October and when there is little or no rain at all. December, March and April are the only months where there is a surplus of rain. In some occasions it can also happens in November, January, February and May.

Babati has three vegetation types: open grassland, two types of woodland: miombo and montane rain forest. Before the district was covered by forests, but when the tse-tse fly came after the First World War (with diseases), people cleared large areas to get rid of it. A consequence of this are that many people moved to Babati to settle down where it was cleared areas to cultivate. This has started an intensive land use where forests now are cultivated land (Sandström, 1995).

1.2 The Tragedy of the commons.

When people do not own the land it is called “public property”(exception of state-owned). It means that it is no mans land and everyone is and are not responsible for it. These natural resources are available for everyone and can for example be the forest with its resources and the fish in the ocean (Fransila 2004, Sandling 2005). These resources are often overused when they not are specific owned of someone. Hardin is the best known author that has described the phenomenon. A herdsman is seeking individual benefits and wants to increase the size of his herd. The commons are not forever and soon the resource is finite and the cattle will transgress the carrying capacity of the land. It is in the interest of the herdsmen to still have more animals because he gets personal gain from one more animal outweighs the lost from have on less, from the harm that is done to the commons. In the end all of them loose because they use the same logic and the commons will be over exploited (Hanna, Munasinghe, 1995). Hardin says that if we shall have specific ownerships, the use of the commons can be better controlled (Söderquist, Hammer, Gren, 2003). Common pool resources are without institutional mechanisms with some regulations of excludability, open-access resources are available for all people, very difficult to protect and easy to destroy (Gibson, McKean, Ostrom, 2000).

1.3 Ostroms 8 principles for a sustainable development.

A solution to the tragedy of the commons is Ostrom's eight principles, which are analysed later in the discussion. I discuss whether they are working in Babati. In the discussion they are taken up one by one and gone through to see if it is a sustainable community with their CBFM in Haraa and Mutuka in Babati.

In Ostroms "Governing the Commons" (1990), there are eight principles for common-pool resources so they can be sustainable. To get these principles she has been studying nine communities, which have common-pool resources, and which have been successful and self-regulated.

The principles are:

1. Clearly defined boundaries.

It shall be very clear who has the right to use the common-pool resource. If this is not done, so it is an open access of the resource and the local users can lose what they produce to them who are not taking part o the work. The worst scenario is that acting of other people can lead to that the resource is destroyed and disappears.

2. Congruence between appropriation and provision rules and local conditions.

Benefit-rules about time, place, technology and/or the amount of resources, which are related to local relationships. This has to be decided by the local community to adjust the villagers; this helps to conserve the resource.

3. Collective choice arrangements.

Most individuals are influenced by the operational rules, which can contribute to a change of them. If the users are Institutions they are more capable of creating rules adapted to the local circumstances. This is because individuals that interact to change the rules after the circumstances at a certain time.

4. Monitoring

The supervisor shall actively see how the resource is used by the users, so that it is convenient with the laws/rules.

5. Graded Sanctions.

Users that break the operational rules are mostly exposed for graded sanctions of other users depending on the crime and the circumstances. In stable institutions, the users themselves do the supervision and sanctioning. The investment of the supervision and sanctions in the common-pool resources can be explained by the term half-voluntarity. Individuals are going to follow the rules when two criteria's are fulfilled: the first is if they can see that the collective goals are reached. The second is that others also are a part in the system.

6. Conflict-resolution mechanisms.

The users and the supervisors have a fast and cheap system when it comes to solve conflicts between the users or the users and the supervisors.

7. Minimal recognition of rights to organize.

The users are independent against other power/governments and often create own rules of the forest-use. Through sanctions the users can self-regulate when the rules are broken.

8. Conflict-solutions for common pool resources.

The system such as the use and patrolling are organised in “nested enterprises”. If the common pool resource is situated in many villages, all of them have common rules for the resource, but they have their own institutions and for example the using-rules can be different between them. We also have to think not only at the local level to protect a forest, but also see at higher levels like species level that can be threatened unintendedly. If this is not working it cannot be a sustainable system (Ostrom, 1990).

1.4 The aim of the study.

My purpose is to see how the management of the mountain forests in Babati District, Tanzania works and see if the system is sustainable in a long perspective.

Specific questions are:

- How is the rain-forest use working after the change to Community Based Forest Management?
- Are there any negative aspects with the new system?
- Are Ostroms principles working in Babati?
- What is the opinion of the community about CBFM? Are the villagers satisfied?

1.5 Method

To answer the questions I carried out a case study in Babati on Moist Mountain Forest Management. This is mostly a literature study with elements from interviews and material from Babati. I got material in form of maps and the agreement and by-law from Haraa. It was in Swahili but I had it translated so the main purpose was showed of it. I have searched the Internet for more material. In Babati I had four interviews, the first with Juona Sulman Mwaruko who is working as a guard in Haraa forest reserve, and also with the chairman Nangay Selemani also in Haraa. My third interview was at the District Council where Mr Gambay is the District Catchment Forest Officer. We did A short group interview with Mr Rwiswa who is a Forester in Babati. The last interview was with Josef, the chairman in Mutuka forest reserve.

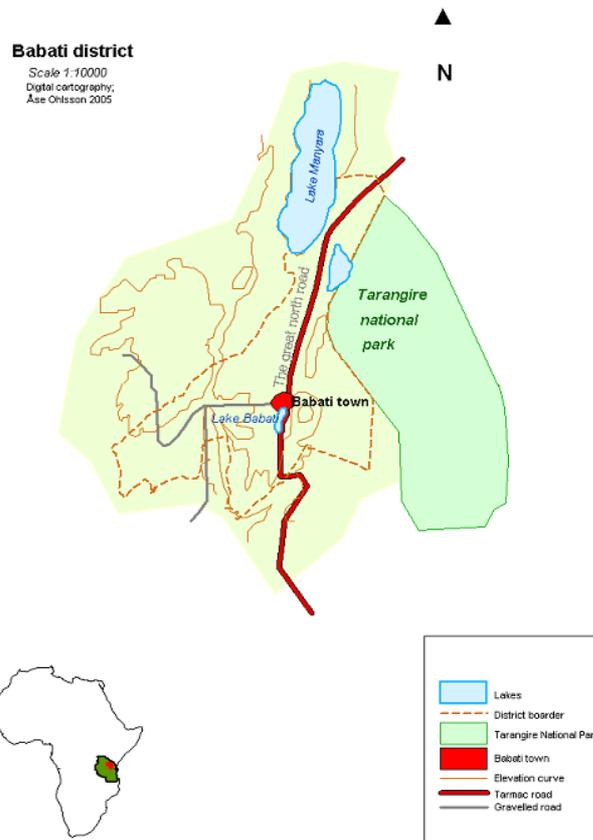
When I was in Haraa village with Mountain Rain Forest I found out that the community is in a process to reach an agreement with the government (it will soon be finished). They have already implemented rules that the villagers are following.

In Mutuka village we walked around in the forest under permission from Josef because it was forbidden for women to be in there otherwise. In Mutuka they have reach an agreement and there is a lowland forest, but I wanted to look at the CBFM there and see if there were differences between these two forest in the management, with one forest that is a completed reserve and one that is not.

1.6 Source criticism

Many sources in the paper are from interviews and it can be misleading because of language problems. I had an interpreter with me to be able to do the interviews. The translation can be correct but otherwise misunderstood by the interpreter or me. The people I had interviews with can have told me things that they thought I wanted to hear. The Internet, books and articles are used and I hope these sources are reliable. These are things that might have been affecting the papers reliability.

Map 1. Overview over Tanzania where Babati is marked.



Projection by Robinson.

1.6 Rain forest description.

Rainforests are divided into four major groups:

1. **Lowland** rainforest is the most thick and flourishing, 25-30 m high trees.
2. **Swamp forest**, is situated where the outflow is bad and were it is yearly flooded.
3. **Mangrove forest**, is situated were land is near and meets the ocean.
4. **Cloud and Montane forests**, mossy forests, are growing on 800-1300 meters asl.

The cloud forests begin at 1300 asl, the trees are at highest 10 meter (Oldfield, 2002). Both forest types are often also called "Tropical Montane-Cloud forests" (TMCF), which are usually defined as forests that almost are always covered in clouds or mist. With increasing altitude on wet tropical mountains, changes in the forest structure occur. The frequency of fog is the most important factor for being a mountain forest. Fog constitutes an extra hydrological input ("horizontal" or "occult" precipitation) that is doing an amount of several hundred millimetres of water per year; it is depending on the cloud character, wind speed and the structure of the vegetation (Bruijnzeel, Veneklaas, 1998).

These forests are usually growing into each other and there are no specific limits between them. The tropics have a high precipitation, constantly high temperatures and a stability in the ecosystem over a very long time and that results in many millions of species that use the forest for their living (Oldfield, 2002).

Rainforests are appreciated for their biological richness and for their ecological services they provides. We have also found medical plants here and in many cases we use the species from the forest for underlay to later synthetic made medicine. Many fruits as (wild coffee, cacao, bananas), almost 2500 species, have their origin from the rainforests. The forest is a very important gene bank for the future but nowadays we want a better yield so that we cross and breed. That result in little genetic variation, which makes our fruits sorts very vulnerable against diseases. If we still continuing too harvest too much, these genes can be lost if the rainforests disappears. Our species of fruits are too weak against diseases and can not cope with them and the result can be that they disappear forever (Oldfield, 2002).

1.7 Mount Ufiome.

Mount Ufiome is one of Tanzania's biggest mountains with top at 2.379 meters and lays in Babati. On this mountain there are four National Reserves and together they are taking up an area of approximately 25.000 hectares. In 1932 Ufiome was made to a reserve and it has many springs and rivers that feed into Babati Lake and that make this mountain an important watershed.

Ufiome is divided into tree zones:

- **The lower**, is about 47 % of the FR, this is a shrub with only a few tall trees.
- **The middle**, is covering about 23 % of the FR, include mountain forest of medium height (less than 25 meters).
- **The upper area**, covering 30 % of the FR, includes taller trees and a plateau at the top with two small lakes (District Forest Officer in Babati District Council, received 050313).

Ufiome forest (Village Haraa) has a special forest type, mountain rain forest, which is situated in the mountains in the uplands in a height between 1000 meter and 1200 meter above sea level. The tree line between 3.350 meter and 3.700 meter asl (Rwisa, interview 050308). An ordinary rainfall is generally generating 1,250- 2,500 mm each time. There is a dry season between one and five months (Weber, White, 2000). The forest is moist and cold, the plants are green all the time of the year. The Montane forest has a different structure than a lowland forest because there are very few tall trees. Higher up in the mountains the trees are shorter because of the soil have low nutrition. This forest is also called cloud forest because the canopies are almost all the time covered in moisture. A Montane and cloud forest also has epiphytes like orchids and ferns growing on the trees. On the ground there is often moss, which can also grow on the trees, and many rare orchids are found in these areas. The growth and decomposition is slow and there is less species here than in an ordinary rainforest (Barrelöv, 2003). Many of the mountain forests are protected because they are watershed areas (Ufiome also) that people are depending of for water supply (Rwisa, interview 050308).

1.8 History of Protected Area systems in Tanzania.

In data from 1998 out of 30 million people in Tanzania, 25 million live in one of the 9,000 registered villages. Every village has a legal and institutional base, a well defined boundary/limit to demarcate the area, an elected village council which acts as a "Land Manager" of communal village lands and is the controlling authority over management

decisions on water sources, grazing land and forests (www.wrm.org.uy/subjects/CBFM/book3.html#Tanzania, 050402).

The Forestry Department was established in 1909 and forest reserves in 1927. From the beginning forest reserves was established to prevent the savannah from taking over the forests place, which usually was the case. Mountains were protected because they are watersheds and protect the hill from erosion. Every forest reserve has a clear boundary and has a warden or officer to take care of the administration (Weber, White 2002).

In Tanzania many people are dependent on agriculture, in Tanzania there is a land-program called LAMP. Their purpose is to in a sustainable way gain the production in agriculture, forests and other nature resources. This program is supported by SIDA since 1990 and they have a project in Babati about the forests. Questions about the environment are very important part of the corporation LAMP. SIDA is supporting a program about the Districts development, they want to strengthen the local management so the local people can have better services (<http://www.sida.se/Sida/jsp/polopoly.jsp?d=265&a=16826>, 050418).

The first attempts to protect forest with Community Based Forest Management system in east Africa were in Tanzania in Duru-Haitemba and Mgori. These projects were aiming to get local people into the forest management because the forest authority had failed and the forests were in bad condition. There are regulations for the villagers that they can not cut trees and some species are specially protected. Fires had earlier been a huge problem but they are now under better control, and the villages draw their own boundaries between the villages. The forest's are divided into tree categories: one protected area, one where they could harvest products with permission and the last one is where they could get grass, dry wood, fruits and medicines. This seemed to be a good project but everything failed after a while. The villagers (Village Council) started to mistreat the forest and shooting elephants and starting fires. These things happened because the leaders were corrupt and had to be fired. A lesson we learnt can be that we need a bigger openness in the forest management. People also need someone to talk to when they want to complain or ask questions (Karlsson, 1998).

In 1998, a new National Forest Policy was promoting Village Forest Reserves and collaborative management regimes between local communities. In 1998 the Community Based Forest Management began with help from the Extension Officer from National Forestry & Beekeeping Division. The Forester worked close to the Communities on one by one basis and visited all villages. He had help from the District Forest Officer in Babati District Council. In the beginning of 2000 the new policy is going further and provides delegation of authority "to the lowest possible level of local management", suggestions of more power to the communities were taken up. Suggestions were PFM = Participatory Forest Management, which purpose is sustainability and CBFM = Community Based Forest Management (Franzén, 2004, also table 1, page 9).

There are four national Forest reserves in Babati District:

1. Nou forest reserve which is the biggest one, moist mountain rainforest.
2. Ufiome forest reserve, all protected since 1932, moist mountain rainforest.
3. Haraa forest reserve, a small forest, moist mountain/cloud rain forest.
4. Bereco forest reserve, miombo woodland, a bit different forests than the others.

Of these four reserves have Nou and Ufiome reached an agreement with the Government of: Joined Forest Management (Haraa and Bereco are under process). JFM means protection of the water and soil, it is state-owned but shared with the communities, which are managing the

forest. The forest has a management plan and every village has their own by-laws, which are individually adapted to their circumstances. The villagers are responsible for the forests protection and are taking the role as the manager.

Map 2, Babati with three marked Forest reserves, Nou, Ufiome and Bereco.

(See also the appendix 1a).

Forest Reserves in Babati District

Scale 1:50 000

Digital cartography: Åse Ohlsson 2005.

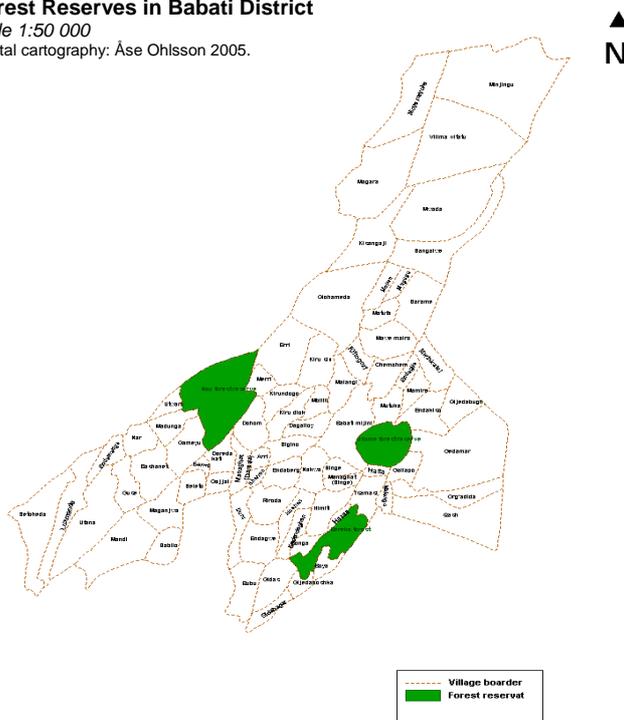


Table 1. List of shortenings in the paper.

Shortenings

CBFM = Community Based Forest Management.

DCFO = District Catchment Forest Officer.

DC= District Council.

FR= Forest Reserve.

LAMP= Land Management Programme.

asl= Above sea level.

NTFP= Non Timber Forest Products.

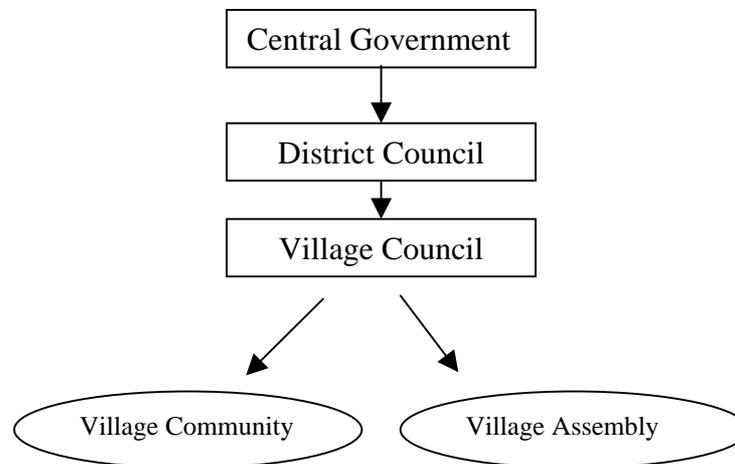
NGO= Non Governmental Organisations.

FR= Forest Reserve.

TMCF= Tropical Montane- "Cloud forest".

2. Management.

Figure 1. Organisation of decision-making in Tanzania.



(Fransila 2004, Sandling 2005).

The Central Government has an act where it says that every village shall have the Village Assembly and Village Council (they are delegated power by the Government). In the District Council foresters are working and they have developing programs in CBFM. Village Assembly elects the Village Council members for three years. The Forest Committee's role is to make the village by-laws and management plan. In the village there is a Village Executive Officer, which is employed by the District Council and shall be there to help the Village Council (Figure 1.).

2.1 Sustainable development.

There are different opinions in the question whether it is possible for development to be more sustainable. The report *Our Common Needs* believes that it is possible, technology and the social organisation can be managed and become better. Development is depending on social and environmental opinions. The nature has its carrying capacity, which means that with too much disturbance the system can not manage more and is destroyed. The social things are our society in time and space (Lafferty and Langhelle, 1999)

In the ecological perspective there is four laws made by *Commoner*:

1. Everything is connected to everything else.
2. Everything must go somewhere.
3. Nature knows best.
4. There is no such thing as a free lunch (Lafferty and Langhelle, 1999).

With the fourth law it is meant that any won game is at some cost (we can not get anything for free). If we take in consideration to these things in management the result is that we can live side by side with the nature.

To have a sustainable development we have to secure the basic needs of the people like human rights, the people shall have food and water, a house to live in. If these things are under control then we can look further and do other priorities. Then we can see after the environment when we know that we can survive the night without war and starvation. If there

are conflicts between the basic needs of the world's poor and environmental concerns, the basic needs shall be the first priority, says the Brundtland Commission. Development shall not be at the cost for the poor people, it must improve the domestic and the country's distribution of benefits. That is possible if the ground rules change so that the basic needs are ensured for all people (Lafferty and Langhelle, 1999).

2.2 Solutions/proposals to preserve the rainforests and to create a sustainable community.

To have a sustainable management over natural resources we need to have improvements in the management. Community Based Forest Management is a form where the main thing is to make sustainability in the forest use. Local communities are always very important for preserving ecosystems and make a sustainable community.

Ecotourism gives incomes and preserves the forest and gives people jobs because of the tourists. People can work for example with national parks in a sustainable way at the nature's capability. Local solutions shall be supported, the protection is dependent of the villagers and if their needs are accomplished then the ecosystem can be preserved (Oldfield, 2002).

To make a sustainable community *International Environmental Union*, United Nations environmental program (UNEP) and world Nature Found have created guidelines to follow:

1. **Respect for all living**, ethics, costs and benefits of nature assets shall be rightly divided between countries and communities.
2. **Improve human's life quality**, economic growth is important but there are limits for it.
3. **Preserve the earth's lifepower and diversity**, the development must be on the nature's principles to protect the ecosystem, their function and function.
4. **Have a very small use of non-renewable resources**, reuse and have an effective use.
5. **Hold the limits of the earth's carrying capacity**, there are limits for how much the ecosystem can carry without impoverish. Political guidelines and technical solutions are needed.
6. **Change peoples attitudes and behaviour**, we have to change for reaching a sustainable lifestyle. The society has to speak for this sustainability.
7. **Make different societies take responsibility for their surroundings**, The government shall give the local people with special knowledge a bigger role in the preserving and local condition shall implement the preserving.
8. **Create international frames to integrate development and nature protection**, a national plan to reach sustainability is to see to everyone's interest and prevent problems. It has to be able to change when new knowledge and needs are found.
9. **Create a new global found**, global sustainability needs stable union between other countries. The countries, which are poorer, must have support to do so. We can reach our common goals if the ethics concern international, national, community and personal level (Reid, 1994).

When it comes to collective actions and group size there is a relationship between them. When the size of the forests councils is bigger, they found it easier to make and preserve processes that will organise their members and the contribution to the protection of the forest.

There are two reasons why it is better with bigger councils:

1. They need guards and they want some kind of benefits for being that. A small village can have difficulties to hire them because they have to little surplus. When the group gets bigger, it is easier to organise to contribute modest amounts that are necessary to hire a guard.
2. For a small council it is difficult to prevent other villages from coming into their forest and break the rules. They have then fewer resources to be persistence to their sanctions on people who break the law (Gibson, McKean, Ostrom, 2000).

2.3 Sustainable Forest Management in tropical forests.

The main thing when talking about sustainability is not to take more wood out of the forest than it can produce. *Sustainable yield = harvest + mortality = increase of trees*. The forest management is sustainable when the income is the same or that high that it can be compared with other incomes. Most of the times the situation isn't so because these forests cant be compared with the income from example oil-palm plantations. Many people takes the conclusion that they have to think about the salary and then the forests value becomes low, and often give place to a plantation. There are some guidelines for effective forest management:

- Obtain high long term revenue per year

If you not, the forest will be used for something else which gives incomes.

- Inventory to estimate the long term productivity

Sustainable forestry is based on knowledge about long-term productivity. Old trees are more valuable than young ones.

- Planning

Every harvest shall lead to better potential and value than before. You shall have the option to choose the best way to harvest, the transports, the felling and tree choice but it shall be done with respect for the future (Hagner, 1997).

When the population grows also the problem with land use is bigger (forests becomes cultivated land), in countries with low population this is not the problem then is most the technical things that isn't working. To have a sustainable forest management these things have to be a part of the plan: maintaining biodiversity, productivity, and regeneration capacity. These things shall then be in counted with ecological, economic and social functions (Maluenda, 1997).

We can avoid negative impacts by having:

1. Carrying Capacity studies.
2. Regulation of users, amount extracted, times of year and use method.
3. Enforcement by Government agencies.
4. Control by local people.

If these things are used in the forestry the local people shall get increased incomes and they should be encouraged for a low impact use of the forest. Markets and developments must be studied and investigated for improving the links between the producers and the market. This can be done by a Government agency like Forestry Commission for example with inputs from other Non Governmental Organisations (NGO) (Orgut, Barrance, 1997).

Laws are very important when it comes to sustainability and they have to be very clearly defined. In Tanzania there is in procedure to have the change to sustainability. It takes to develop this is there has to be a constructive negotiation that will develop the management program (Woodcock, 2002).

2.4 Community Based Forest Management (CBFM).

A forest management system where the local people are managing the forest: is called by the Ministry of Natural Resources in Tanzania: Community Based Forest Management. By local people they mean they whom live in or next to the forest. The forester's role is to guide and encourage and give support to the village. The main thing with CBFM is to have a sustainable forest use by sharing the management. This leads to that the villagers feeling responsibility for the forests condition and want it to be fit and in a good condition (Fransila, 2004).

CBFM was already in 1994 in progress in Babati and it was in the unprotected areas pilot-projects began. Today there is eighteen villages that have Village Forests Reserves. The management plan for communities are most dependent of the Village Forest Committee (VFC) and they are trained in forestry by professional foresters, which comes from the District Council. The VFC the villagers elect members and if someone new comes the old ones helps them with their task. The VFC goes to seminars and have a salary for their time spent at these but they are not paid for the other job they do but in meanwhile the money from the interterm goes to the village like the School for example (Selemani, interview 050314). The main function of VFC is to act like the forests manager and prevent illegal cutting by having guards who is patrolling the area and gives permission and have the basic management of the forest (Fransila, 2004). They can form sub-committees and represents the village for the Government and can make village by-laws. These local committees are very common today in Tanzania (Woodcock, 2002). In the committee are about 10-12 people, which are working under tree years. Then a new election comes when the villagers select who shall be in the new committee (District Forest Officer in Babati District, received 050313). The village is the "manager" of the forest, when the central government gives technical advise, a binding between central and local governments, and mediation in dispute among village forest managers, which acts as a watchdog on progress (www.wrm.org.uy/subjects/CBFM/book3.html#Tanzania, 050402).

Clear rules have been set out how the Village Forest Management Areas shall be used by doing the By-laws. Activities, which lead to support degradation, are prohibited like timber harvesting, bark stripping and hunting (District Forest Officer in Babati District, 050313).

The reserves are also used for collecting traditional medicines, food, fuelwood etc. Some of the TFR are not actively used and which is pretty common (<http://www.mckone.org/tfrung.html>, 050402). In Haraa village they were not allowed to cut down trees so the villagers had planted trees near their houses. In that way they had timber for building material and charcoal so now they don't have to cut down the forest (Selemani, interview 050314).

List of forest use:

- * Prohibited products and actions in the reserves: cut down fresh trees, to start fires and build houses in the forest, have cattle in the forest, bark stripping the trees, hunt, charcoal burning.
- * Allowed products from the forest: take so much grass you can carry on your own, take fruits, lying wood on the ground.
- * Allowed activities with permission: take down dead trees, take herbs.
- * Allowed activities with a fee-payment: cut down dead trees, take herbs for medicine, more grass than you can carry, groups who would like to see the FR will have to pay.

(Sulman, interview 050309, DFO in Babati District 050313).

In the interview with chairman Selemani in Haraa village he explained that they did not use the forest for anything else than to collect fruit, take grass, dead trees and to get herbs for medicine. They were not allowed to do any cutting because the forest shall grow up again. It has been mistreated for a long time and now they are having an agreement with the government for CBFM and it seems like it has been better since then. He pointed out some areas where it used to be grass and small bushes but was nowadays-small trees were growing (Selemani, interview 030314).

Non Timber Forest Products = NTFP is anything you can take from the forest without cutting (this includes firewood). This can be important for villages that small incomes so this could give them extra money. It can be fibres, palm leaves, seeds, fruits, grass, oils, waxes, nuts and much more.

Following things can do NTFP important:

- * Give the people alternative sources of income when they are not allowed to cut and sell the trees.
- * Give them alternative forms of income.
- * Promote community cohesion (Barrance, 1997).

Community Based Forest Management is based on knowledge and wisdom and is adapted to the local condition of the village. NGO:s think this system is the best when it comes to preserve sustainability and equity (www.fern.org/pubs/platform/KpSHK.htm, 050329).

Since the villages took over the forest management from the Government in some Babati villages, it has been highly protected. Before there were fires and hard for the villagers to take contact with the state or another owner of the forest. Before CBFM it was only one man who they should get in touch with and often it wasn't possible to take contact him.

Every village have by-laws specially adapted to fit their own circumstances. If someone breaks the rules they will be fined 50 000 shilling which is a large sum (a teacher's salary is 70 000 Tanzanian Shilling per month). If you can not pay then you will be going to court and later sent to jail (Sulman, interview 050309).

Community Based Management has three different types:

- * Village Land Forest Reserves: Forestland ownership is vested in the entire village community;
- * Community Forest Reserves: forests owned and managed by a sub-group of the village community.
- * Village Forest Management Areas: areas of government reserves, under community management, not ownership. (Gambay, interview 050312).

There are 9 principles for Community Based Forest Management:

1. The main actors are local people
2. The managing institutions are controlled, involved and formed by the villagers.
3. They shall have a clear territory, which is secure and legal.
4. The people and the forest have a close interaction and the ecosystem and is important for their living.
5. Indigenous knowledge is a base for the policy and the system of forest management. Modern knowledge can develop and enrich the system to local conditions.
6. Technology shall be used if it is adjusted to the local peoples ability to handle it.

7. The production has a limit because of the principles of sustainability.
8. The economy is based on the common welfare.
9. The base in every sector is biodiversity, in terms of genetics, cultivation and their species, patterns and economic system among others (www.fern.org/pubs/platform/KpSHK.htm, 050329).

The Consortium for Supporting Community Based Forest Management system (KpSHK) is a network organisation, which was established in 1997. It was from a response of NGOs and people's organisations who were interested in natural resources, specially the forest questions. They have been supporting natural resource management developed by local people (www.fern.org/pubs/platform/KpSHK.htm, 050329).

Problems and risks with CBFM.

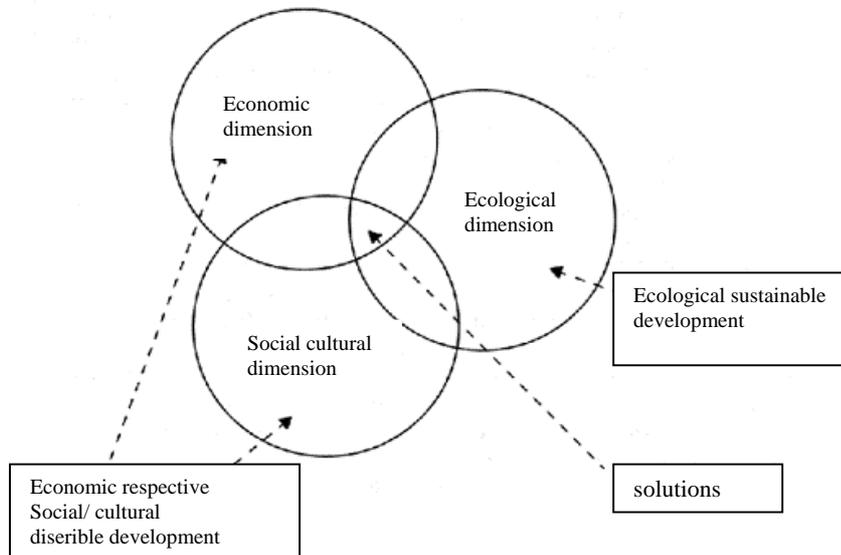
The risks can be that the villagers (Village Council) start to mistreat the forest. That could be because of corruption in the VC (<http://www.mckone.org/tfrrung.html> 050405).

Haraa and Mutuka has no conflict solution plan. In Ostroms guidelines for Sustainable Forest Management she takes up conflict solution as a important factor, is this missing it can be difficult to solve smaller or bigger disagreements (Ostrom, 1990).

A big risk is also when people's needs are threatened. This can be human rights, food, water, medicine and shelter. If these things are not working the forest is going to suffer because the people's needs are to everyone the first priority (Lafferty and Langhelle, 1999).

Corruption is a problem, when people can be bribed to get their will trough. This has been a huge problem in Babati and still there are problems with bribes (Rwisa, interview 050308).

Figure 2. A solution for reaching sustainable development is in the middle of Economic, Ecological and Social-cultural Dimension.



(Söderquist, Hammer, Gren, 2004).

To make a development and have it sustainable there has to be an economic, an ecological and a social-cultural dimension. If these things are between or in the middle we can find a solution to the problems (Figure 2).

We must see to our needs and also to the future generations and their needs and possibilities. An economic and social solution is not always the best solution when it comes to ecological questions (Söderquist, Hammer, Gren, 2004).

Some definitions of sustainable development according to the Brundtland commission:

- Sustainable development is when the wellbeing doesn't diminish over time.
- Sustainable development is when the nature's capital doesn't reduce over time.
- Sustainable development is to care about the resources so that a sustainable yield for goods and services can be maintaining.
- Sustainable development is to maintain the social-ecological system resilience over time.
- Sustainable development is to create consensus and knowledge (Gibson, McKean, Ostrom, 2000).

When it comes to sustainable local management many writers take up tree things that are needed:

- The local people must value the resource
- They must have some property rights to the resource
- They must construct local-level institutions that are controlling the resource (Gibson, McKean, Ostrom, 2000).

3. Discussion.

The management in Haraa and Mutuka in Babati seems sustainable because in the interview all of the villagers thought it was good to the people and the forest. The forest has since the agreement been better with increased tree growing, mushrooms to collect and more groundwater in Haraa, for example, less fire than before the reserve was planned. One negative thing Selemani (chairman) thought was the cattle, where could they have their grazing? They are not allowed to go into the forest so they have to get some different pasture for them. This has been very popular by the people in Babati because they can see improvements.

When I have read many books and texts, I now understand the importance and the usefulness of the local people. In almost every document the author is pointing out that one of the most important things of creating a sustainable forestry is to include the local people. They are living in or next to the forest and if the local people are managing the forest, the result is often very good (Oldfield, 2002).

In this case study there are signs that the community of Haraa and Mutuka have succeeded in the managing the forests. In the CBFM, where the local people are involved in the managing with support from the government, managing is a success. The fires have been reduced and the trees are coming back where there before was only grass-vegetation. It is still a way to go in Haraa, for example they have not reached an agreement but it is on the way. The chairman showed me a place where the trees were very small and people used to take firewood and cut trees from the area only tree years ago. When it stopped the trees have started to grow (Selemani, interview 050314).

If we take in consideration these things like “Natures knows best”, “Everything is connected to everything else”, “Everything must go somewhere” and that “we can’t have anything for free” we should have a sustainable development. If we see first to our needs like the basic ones like water, food and shelter and make them fulfilled we can then look to other problems like the environmental ones. So if the poverty is not defeated these other problems cannot be solved (Lafferty and Langhelle, 1999).

Are Ostrom’s (1990) recommendations working in Babati? Beginning with the first rule to have clearly defined limits and laws, this works most of the times. In Babati all the CBFM: s has their by-laws to follow and they will be punished if they do not follow the rules. They have to pay or go to prison if they can not do that.

The second rule, to have a balance between benefits and costs, is fulfilled. The villagers can take fruit, grass and other things for their household-use but have to pay if they want to take a dead tree or herbs for medicine. They seemed to be satisfied with these things according to my interview in Haraa (Selemani, interview 030314).

The third recommendation seems also to work: Arrangements for collective acting, that it is important to have certain rules made by an institution so the members can not change them when they want to and that the rules will be adapted to circumstances of each village. In Haraa in Babati they are together with the Government managing the forests through CBFM and this has so far been working well (Sulman, interview 030309). In Mutuka, the chairman said that the villagers now have more respect for the forest and it has recovered since the implementation. In Haraa the villagers follow the rules even if their agreement isn’t finished yet. There had only been one incident where a man who was a bit mentally retarded had been cutting trees to build a house. No other incident has been discovered in these two places (Selemani, interview 030314).

Number four is monitoring, this is working because the villagers/ Village Forest Committee have meetings every month so the government can be involved about what happens in the village. They are not governing the resource by themselves. Village Council have help from the District Councils Forest Officer.

Number five is about sanctions, the villages have them. There are sanctions and punishments if a villager or an outsider is doing something against their by-law, which is forbidden. This will deter the villagers from make forbidden actions (Ostrom, 1990).

Number six is that they shall have a fast system to solve conflicts. Here it seems unsure if they have something planned for possible disagreements (Sulman, interview 030309). In the recommendation from the principles it stands that the Government shall play a mediator to solve conflicts (Ostrom, 1990).

Number seven is about creating their own organisations. Babati have Community Based Forest Management and Joined Forest Management systems. Villages are all having their own village Council and are monitoring the forest reserves with some help from the Government. The eighth recommendation is that one can not only see in local level protection, we have to look in a bigger perspective. Common pool resources are organised in different layers called “nested enterprises”, where the using, patrolling and conflict-solutions are organised in (Ostrom 1990). All villages have the individual by-law to follow and they have follow the law with only one exception (a bit mentally retarded man cut some forest in Haraa for building his house) and there is no other incident that has happened in Haraa or Mutuka (Sulman, interview 030309).

4. Conclusion

My conclusion is that Babati will have a sustainable management if they follow the rules and laws that are made for Community Based Forest Management. If the communities are getting some kind of benefits for the managing they want to take care of the forest in a good way when they are the owners. If there are threats against the villagers like pressure from others villages or corrupt people, this sustainability can be destroyed. Forces from outside have a big impact on Community Based Forest Management. It looks like the system will remain a sustainable when the comparison with Ostroms recommendations was made.

Recommendation number six is the only one that the communities Mutuka and Haraa don't have a solution for. The recommendation is a conflict solution plan. Maybe it is easy to solve smaller conflicts if the Government can play as a mediator but maybe that is not the case. They should be working out a plan for a quick disagreement-solution and the community should get help from District Council with support from the District Forest Officer. When the local people are able with support manage a reserve, take care and live of the forest a sustainable forest use is reached.

Therefore, my conclusion is that having Community Based Forest Management in Babati, Tanzania can solve the forest overexploitation problems.

A question that I asked myself is what will happen when the forest has grown up? Shall the villager's cut in a sustainable way and get an income or goes everything to the government? Shall the Government share the money with the community?

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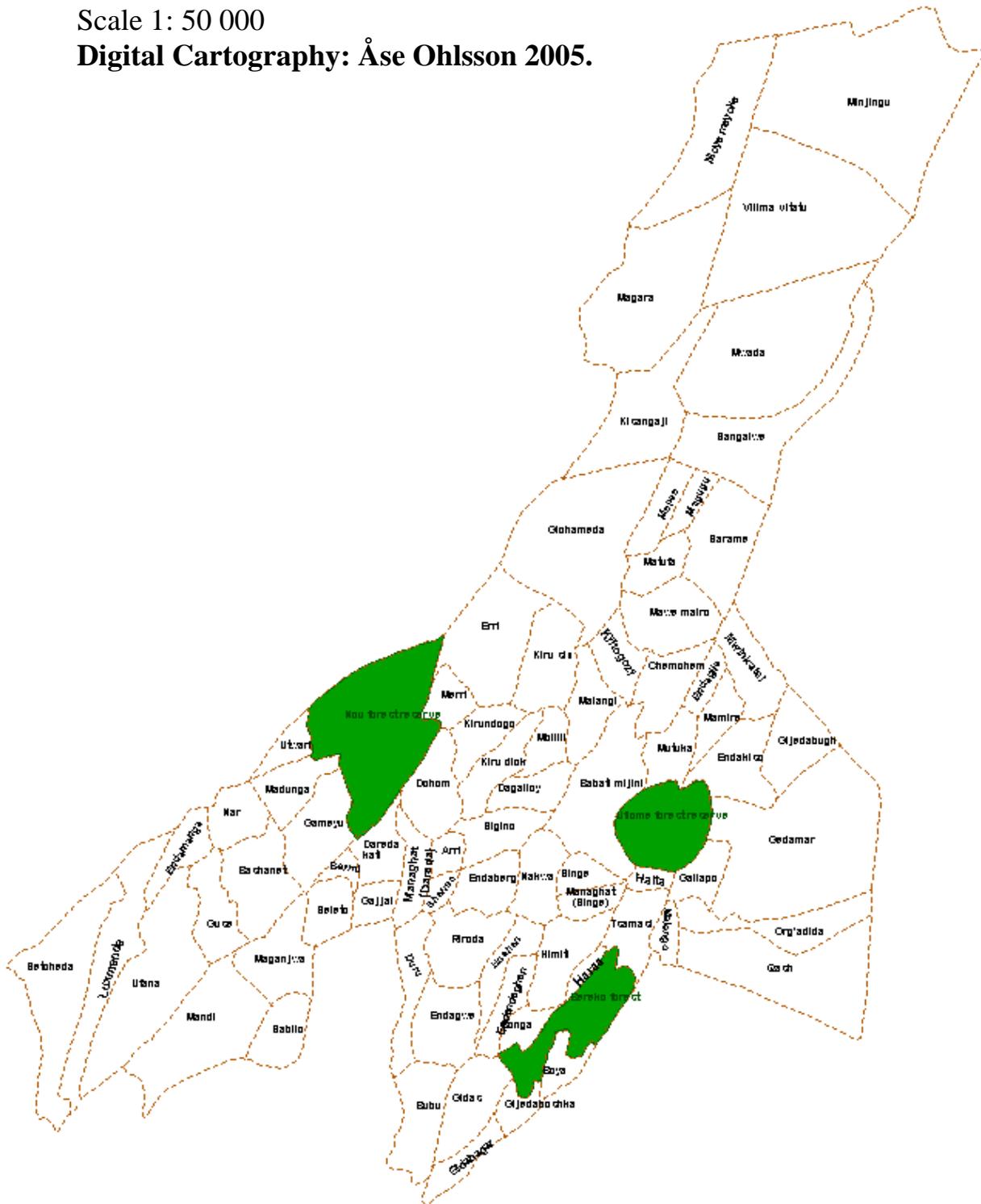
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Appendix 1a.

Forest Reserves in Babati district.

Scale 1: 50 000

Digital Cartography: Åse Ohlsson 2005.



Appendix 1b. Summary of the Agreement in Ufiome, made by Alfred Nyeko, Stockholm 050503.

ASSOCIATIVE SUPERVISIONAL AGREEMENTS FOR UFIOME NATIONAL FOREST, BETWEEN THE DIRECTORATE OF FORESTRY AND BEEHIVES, MINISTRY OF NATURAL RESOURCES AND TOURISM

AND

THE LOCAL GOVERNMENT OF MUTUKA VILLAGE, MAMIRE WARD, BABATI DIVISION, BABATI DISTRICT, MANYARA REGION.

These agreements stipulate the relation to the duties and obligations of Mutuka supervisonal area of the forest in the Ufiome National Forest.

1. DESCRIPTION REGARDING THE SUPERVISION OF THE AREA

The forest area in which the Mutuka village is responsible for supervision is solely the National forest area of Ufiome, which borders the Mutuka village according to the attached map.

The borders of the area have been agreed upon with the neighbouring villages of Maisaka and Endakiso. It is also endorsed by the officer for forestry Babati district who is also the representative for forestry and beehive.

The type of forest, size of the area and the status of the forest as narrated on the “Forestry Planning and Associative Supervision” (attachment number 1)

2. AGREEMENTS OBJECTIVES

To ensure that the Mutuka village bordering the National Forest of Ufiome will take care, preserve, benefit and develop its area of supervision and comply with the regulations, terms and conditions stipulated in Forestry Planning and Associative Supervision which is the basis for the agreements.

3. AGREEMENTS AIM

To ensure that all involved parties abide and follow significantly the terms and conditions stipulated for the forest area of Mutuka and comply with the Forestry Planning and Associative Supervision.

4. INVOLVED PARTIES IN THE AGREEMENT

The agreement is between the Mutuka village local Government (from the village side) and the directorate for forestry and beehive(from the central Government side)

The agreement is according to clause 16 of the Forestry Act number 14 of 2002.

The agreement is endorsed by:

- a. Chairman of the village local Government and the chairman of the village natural resources committee of Mutuka village*
- b. Officer for national forest Babati district (on behalf of the director of forestry and beehive) and acting director for the municipality of Babati district (on behalf of the Government of the united republic of Tanzania)*

5. OBLIGATIONS AND RESPONSIBILITIES OF THE INVOLVED PARTIES

5.1 Obligations and responsibilities of the village (appointed manager)

The Mutuka village through its local Government is obliged to preserve, take care and develop the national forest of Ufiome by conducting the following:

1. *to ensure that the regulations regarding protection and taking care of the forest area are understood accepted and are followed by all the villagers*
2. *to appoint a village committee for natural resources which is approved by the village general meeting aiming at giving directives to how the conservation activities are to be performed.*
3. *to form minor clauses for the villages natural resources (attachment number 2)*
4. *to co-operate with the ministry of forest and beehive (experts on forestry) aiming at rectifying forest activities.*
5. *to co-operate with the neighbouring villages aiming at preserving, taking care and developing the forest.*

5.2 Obligations and responsibilities of the Government

The Government of the united republic of Tanzania through the ministry of forest and beehive is obliged to preserve, take care and develop the Ufiome national forest by conducting the following:

1. *to co-operate with the village and the natural resources committee in planning forest development activities*
2. *provide training on forest conservation and environment*
3. *give expert advice on how to grow, plant and tree care taking*
4. *provide training to villagers to enhance their performance in forest conservation*
5. *assist in the activities related to forest preservation of Ufiome*
6. *take care of the plans and forestry Acts*
7. *ensure that the villagers benefit from the activities they perform in order to eradicate poverty*

5.3 Obligations and responsibilities of the committee for natural resources

Following the regulations, terms and conditions in the Forestry Planning and Associative Supervision. The obligations of the committee on behalf of the village local Government is as follows:

7. *to protect the forest area against actions aiming at destroying the forest*
8. *to ensure the area is used according to the plans and that all comply with the regulation stipulated in the Forestry Planning and Associative Supervision.*
9. *to enforce the minor clauses and deal with all who violate the clauses*
10. *to receive, save and be accountable for all expenditures and income from penalties according to the Forestry Planning and Associative Supervision.*
11. *to secure the plans and have transparency on measures to clear the areas outside the forest borders and to take appropriate measures in rectifying area which are impaired.*
12. *to inspect the forest area at least three times a month aiming at evaluating preservation activities and general follow up.*
13. *to inspect the forest area together with officer for conservation forestry (district) or forest officer (district) Babati with the aim of asserting the development of the forest.*
14. *to inform on development activities at least once a month. The village local Government shall inform about the forest activities to the general meeting and to the forest conservation officer (district) Babati according to the regulation provided in the Forestry Planning and Associative Supervision.*

15. to record and archive documents concerning the forest management according to the Forestry Planning and Associative Supervision.